

## World Agriculture & Trade



John Dyck

# South Korea's Agricultural Policy Hampered Economic Growth

The rapid economic development of South Korea (Korea) is often considered a model for developing countries to follow, and some of them may consider adopting the Korean pattern of policy choices. However, while Korea clearly prospered between 1975 and 1990, a new ERS study finds that Korea's agricultural trade policies hindered, rather than helped, the country's economic progress. *Structural Change and Agricultural Protection: Costs of Korean Policy, 1975 and 1990*, examines South Korea's agricultural trade barriers, comparing their effects with those of alternative policies on the country's economy in 1975 and 1990. Results show that the costs of Korea's agricultural protection were high, and increased over time.

## Korea's Rural Sector Interventions

Since the late 1960s, South Korea's government has sought, through various interventions, to keep the welfare of the rural population from falling behind that of the urban population, while not harming the rest of the modernizing economy. Many of these interventions improved the infrastructure and technology available to farming, and increased rural households' access to nonfarm jobs. Since 1975, the

country's government has also transferred funds to farm households. Most of these transfers have been indirect in the form of higher prices paid by consumers—ensured by closing Korea's borders to most agricultural imports—with the rest being direct payments from tax funds. Korea's support to agriculture continues to be quite high relative to other countries. Calculations by the Organization for Economic Cooperation and Development (OECD) show that Korean support, as a proportion of its gross domestic product (GDP), is almost the highest among member countries.

In 1989, Korea was persuaded by its trade partners in the General Agreement on Tariffs and Trade to begin agricultural trade liberalization. As a result, the country's imports of many products grew during the 1990s, benefiting consumers. The farm sector absorbed price competition from imports without collapsing.

Rice remains a major exception to the trade liberalization trend. Complete protection of the domestic rice market from international competition has been the central component of Korea's agricultural support since the late 1970s. In 2000, the OECD estimated that support for the rice

market price, achieved primarily through government control of imports, provided almost \$8 billion in subsidies to rice farming, over \$8,000 per hectare annually. In the Uruguay Round of international trade negotiations, Korea agreed to import a specified amount of rice each year. However, since rice is imported only by the government trading enterprise and is never released for general purchase, the imports do not affect domestic rice prices.

## Policies Had Mixed Results

Objectives cited by Korea in formulating food and agricultural policies have been:

- enhancing farm income;
- achieving food self-sufficiency;
- conserving foreign exchange;
- limiting government spending; and
- securing price stability;
- controlling real urban wages (or inflation).

Korea has experienced a mix of successes and failures in achieving these objectives. The goal of boosting agricultural income was at least partially met after 1970. The annual income of rural households rose above that of urban households in 1974-77 and again in 1982-83, and was only slightly less than urban levels in other periods. Gains in rural household income were due in part to higher prices for agricultural products, but due even more to farm household income derived from off-farm sources (such as wages and remittances from urban relatives). The proportion of farm household income from non-farm sources increased from 18 percent in 1975 to 43 percent in 1990 and to more than 50 percent in 2001.

Korea has explicitly targeted its policies to achieve food self-sufficiency. In practice, Korea has realized self-sufficiency only for rice. For all foods, self-sufficiency on a caloric basis fell steadily from 1970, and dipped below 50 percent in 1999.

The goal of saving foreign exchange for other uses was achieved as Korea's agricultural trade barriers reduced imports below free-trade levels.

## An East Asian Miracle?

South Korea is often included with the other “Asian Tigers” (Taiwan, Hong Kong, and Singapore) as well as Japan, in an East Asian group of economies that achieved rapid growth and profound economic and social transformation since World War II. The virtues of East Asia’s development policies have been widely presented. However, strong critiques of the policy regimes have recently emerged. Research by Young has demonstrated that most of the economic growth realized by the Asian Tigers resulted from growth in factor inputs such as capital accumulation. After accounting for the dramatic increase in human capital embodied in the education of the postwar generations, growth in East Asian productivity is not exceptional. Indeed, Singapore exhibits negative growth in total factor productivity. If Young and others are right, inducing households to accumulate capital by saving and educating their children can lead to economic growth, in the right circumstances. But, as global economic conditions change, the East Asian economies may no longer have sufficient vigor for further rapid growth. The Asian financial crisis of 1997 exposed the fragility of industrial finance and governance in much of Asia, adding credibility to doubts about East Asian policy choices. On the other hand, South Korea’s rapid recovery from that crisis has bolstered arguments for the underlying strength of the East Asian development strategies. The controversy continues.

Whether or not the competitiveness of the economy as a whole benefited from far-sighted government management, East Asian agriculture has not been globally competitive. Once the flow of postwar food aid ceased, protectionism characterized agricultural trade policy in much of the region, along with self-sufficiency goals for rice, the staple food. Behind the trade barriers, East Asian agriculture became less competitive with the rest of the world.

### More information:

Young, Alwyn. 1992. “A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore,” *NBER Macroeconomics Annual 1992*. pp. 13-54.

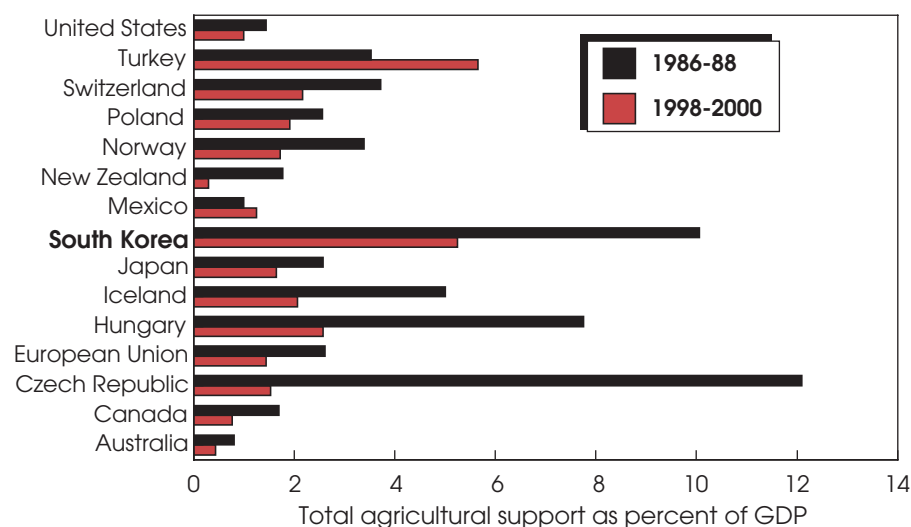
Young, Alwyn. 1995. “The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience,” *Quarterly Journal of Economics*. Vol. 110, No. 3. pp. 641-80.

Korea’s efforts to boost agricultural income and domestic rice production came at the cost of higher retail prices and large budgetary outlays. The government directly purchased rice from farmers at above-market prices. Resale of the rice at less than purchase and storage costs caused large annual program deficits over the course of three decades that were covered out of tax revenues. Alternatively, the government could have chosen to reduce taxation or to spend the money in other ways to assist agriculture or the nonagricultural sectors, with potentially higher benefits.

Korean consumers paid prices for basic foodstuffs (e.g., rice or beef) that were considerably higher than prices prevailing in other countries. The effects of higher consumer prices were proportionally greater on lower income urban households than for higher income households. The higher prices tended to force real urban wages higher, reducing Korea’s international competitiveness and contradicting the government’s policy goal of keeping food prices low to dampen inflationary pressures.

Beyond the stated objectives, Korea’s protection of agriculture kept resources in agriculture, and this distortion of resources, together with high food prices, limited growth in the manufacturing and services sectors.

## South Korea's Ag Support Has Dropped, But Is Still Second-Highest Among OECD Countries



GDP = Gross Domestic Product.  
Based on data from OECD Monitoring Report, 2001.  
Economic Research Service, USDA

Korea’s agriculture experienced some structural change between 1975 and 1990, but the nature and extent of change was likely influenced by the high level of protection from world markets that Korea’s policies enforced during that period. Agriculture’s share of GDP fell from 29 percent to 11 percent between 1975 and 1990, but the share of primary agriculture (crop farming and livestock raising) fell proportionately less, from 8.1 to 7.4 percent. The bulk of the decline was in processed agricultural goods, which fell from 17 to 2 percent of GDP. Protecting farm outputs raised their price to processors, and appears to have diminished the capacity of Korean processing to compete, inside and outside Korea, with foods from other countries.

## World Agriculture & Trade

### Agricultural Protection Reduced & Distorted Economic Growth

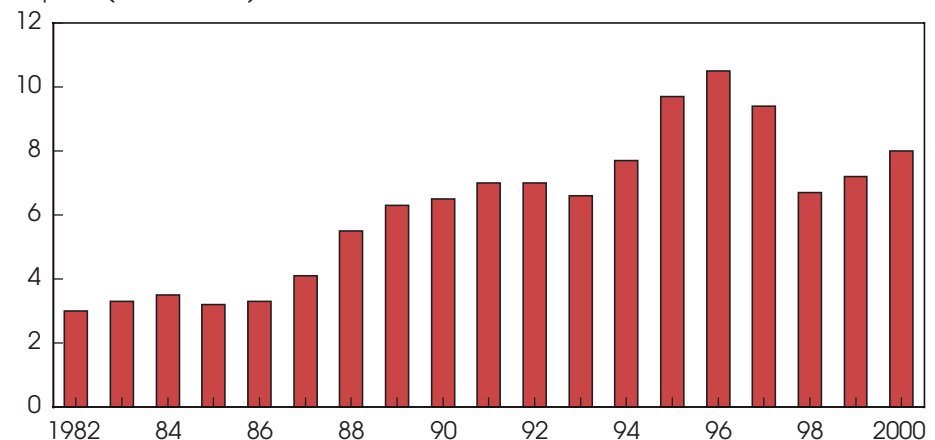
The ERS study simulated how the Korean economy might have looked if agricultural trade protection were removed. The study shows that not all agricultural and food manufacturing activities were protected equally, which distorted the composition of Korean primary agriculture. The actual output of polished (milled) rice was 10 percent higher in 1975 and 27 percent higher in 1990 than it would have been if trade were removed. In contrast, the output of vegetables and fruits was 1 percent lower in 1975 and 3-5 percent lower in 1990 than it would have been. Thus, the share for rice in the total value added by primary agriculture was significantly higher, and the share for vegetable and fruits was lower, because of the agricultural trade policies. By protecting rice and animal products, Korea's border policies drew more resources—labor and land—into producing those commodities. Less labor and land were available for vegetable and fruit farming, which had lower rates of protection in 1990.

Typically over the course of economic development, agriculture's contribution to a country's GDP becomes smaller as more investment goes to nonagricultural sectors and labor migrates out of agriculture. The agricultural share of total output becomes smaller. However, the distortions caused by agricultural trade policies in the economy as a whole can remain serious, even when the sector shrinks as a share of total output. The policies can increase the costs of food processing, textile, and other industries that use agricultural products as inputs, and also cause labor costs for nonagricultural industries to rise, as noted above. Policies can also induce capital investment and labor supply to go to agriculture when market forces would otherwise place them elsewhere.

A small share of GDP in agriculture does not necessarily imply that the cost of agricultural protection is low. The ERS study finds that Korea's GDP would have been 0.7 percent higher in 1975 without the agricultural border protection, but that lifting the protection in 1990 would have increased GDP by over 4 percent. The study also suggests that the cost of protection, in all its forms, increased with the

### South Korea's Rising Agricultural Imports Reflect Trade Liberalization

Imports (billion U.S. \$)



Based on official Korean trade data.

Economic Research Service, USDA

### Ag Trade Liberalization in South Korea Would Have Increased Real GDP and Lowered Consumer Prices

Indicators	1975	1990
<i>Percentage change from actual value<sup>1</sup></i>		
<b>Real GDP<sup>2</sup></b>	0.69	4.58
Agricultural GDP	-32.40	-44.04
Manufacturing GDP	2.18	0.15
Service GDP	0.30	0.14
<b>Consumer price index</b>	-1.84	-1.74
Primary agriculture	-1.97	-20.04
Processed agriculture	-6.82	-2.82
<b>Producer price index</b>	-5.73	-4.76
Primary agriculture	-14.40	-47.44
Processed agriculture	-27.73	-27.85
<b>Total exports</b>	2.70	2.38
<b>Total imports</b>	2.12	2.35

1. Based on model simulations of what the indicators would have been had agricultural trade liberalization taken place, compared with what actually occurred. 2. Real GDP was normalized by the consumer price index, but sector GDPs were not.

Economic Research Service, USDA

level of Korea's economic development; and that the earlier the protections were removed, the better off Korea's economy as a whole would have been.

Korea's heavy border protection reduced imports. In both 1975 and 1990, imports provided a small or zero share of total consumption for most of the highly protected commodity sectors. For example, imports of rice and barley were effectively banned in 1990. Lifting these bans would have led to striking changes. According to

ERS analyses, production of barley would have ceased, with demand fully satisfied by imports. For rice, 28 and 20 percent of domestic demand in 1975 and 1990, respectively, would have been met by imports. In the Uruguay Round, Korea agreed to allow rice imports to increase to the minimum access level of 4 percent of domestic consumption by 2004. The estimates for full liberalization indicate that Korea's rice imports would considerably exceed the 4-percent level. Also, sharp increases in imports would have occurred



## World Agriculture &amp; Trade

## Removing Agricultural Protection in South Korea

A new ERS report on the effects of Korea's protectionist policies on its own economy compares the situation in 1975 with that in 1990. The endpoint for the analysis, 1990, marked the point at which Korea began the process of dismantling its protectionist system. Since then, its border barriers to imports have been lowered, although protection for rice is still very high.

The General Agreement on Tariffs and Trade (GATT) discouraged quantitative restrictions on trade, unless special circumstances prevailed. Korea, which for many years had balance of payments (BOP) deficits and sought to minimize imports partly to conserve foreign exchange, used language in Article 18 of the GATT that allows countries to impose quantitative restrictions if they have BOP deficits. Accordingly, Korea's government used a system of import licensing for many commodities, and then almost never issued import licenses, effectively banning imports. The same general system still prevails in a number of developing countries, also under the protection of Article 18.

Under the GATT, countries using Article 18 to justify trade barriers were subject to periodic review of their BOP situation. In 1987, a GATT committee reviewed Korea and encouraged it to give up the restrictions, because by then Korea was running BOP surpluses. In part using this finding, the U.S. successfully challenged Korea's quantitative import restrictions on beef in a GATT dispute in 1989. A subsequent review of Korea's BOP status in 1989 also confirmed that Korea didn't need the quantitative restrictions to save foreign currency, because it was running a surplus in its current account. In the face of these findings, Korea agreed in 1989 to eliminate its quantitative restrictions by 1997 (except for rice). The Uruguay Round of the GATT coincided with the phaseout of the BOP trade barriers. In 1995, Korea's commitment to the Uruguay Round Agreement subsumed the BOP concessions and, in some cases, amended them.

Within Korea, parliamentary votes, presidential statements, and street demonstrations all indicated opposition to ending the import bans. Korea was obliged to liberalize by its own need to remain part of the world trading system. Access to foreign markets for its manufactured products was vital to the Korean economy, giving Korea a commitment to free trade in general. At the insistence of its GATT partners, Korea then reluctantly began applying a free-trade policy to its own agricultural sector.

Agricultural commodities were freed from absolute quantitative limits in stages, beginning in 1989 and ending in 2001 (except for rice). Tariff-rate quotas were applied to a number of commodities. For these commodities, imports above a certain threshold faced high over-quota tariffs. In some cases, imports surged after liberalization, as was the case with bananas in 1991. Agricultural imports rose from \$6.5 billion in 1990 to \$10.5 billion in 1996, partly in response to the increased opportunities for trade.

for beef and pork, milk products, vegetable oils, and flour.

## Should Other Countries Emulate the Korean Example?

Korea provides an important example of agricultural policymaking in the course of rapid economic development, and provides rich data for economic analysis. Korea's problems and policy alternatives

are not unique and are likely to emerge repeatedly among countries that develop or modernize. Policies that raise consumer food prices burden the whole economy, not just consumers. Raising prices received by farmers retards structural adjustment in farming and distorts the farmers' choices of what crops to plant or livestock to raise. The farm sector becomes dependent on policies that isolate it from world agricultural markets.

Once farmers adjust to prices far above world levels, the potential shock of removing border protection becomes large. While the overall economic benefits of freer agricultural trade are large, the welfare effects on farmers are negative, unless other subsidies compensate them for lost income.

One scenario in the ERS study simulated the effect of agricultural trade liberalization assuming that farm labor was not able to shift to nonfarm occupations. To some extent, this situation may exist in centrally planned countries, such as North Korea and China, and in some economies where city jobs are too far away for farmers to reach. The results of the scenario showed that farm income would have been reduced by almost half, if nonfarm employment were not an option, compared to a 1-percent drop in income if farm households had the ability to accept nonagricultural jobs.

In the current Doha Round of international trade negotiations, the relationship of developing countries to the world agricultural trade system is an important issue. The economic perils of relying on self-sufficiency for food security, especially when self-sufficiency is achieved by closing borders, need to be considered. Even if self-sufficiency provides food security (there are strong arguments why it may not), the economic cost is high. Developing countries may be substantially better off by designing policies that help the rural poor compete in world agricultural markets or that provide income assistance unrelated to crop choices. **AO**

*Xinshen Diao (202) 862-8113*

*x.diao@cgiar.org*

*John Dyck (202) 694-5221*

*jdyck@ers.usda.gov*

*David Skully (202) 694-5236*

*dskully@ers.usda.gov*

*Agapi Somwaru (202) 694-5295*

*agapi@ers.usda.gov*

*Chin Lee (202) 694-5354*

*chinlee@ers.usda.gov*

### For more information:

*Structural Change and Agricultural Protection: Costs of Korean Policy, 1975 and 1990*

[www.ers.usda.gov/publications/aer809/](http://www.ers.usda.gov/publications/aer809/)

ERS Briefing Room on South Korea  
[www.ers.usda.gov/briefing/southkorea](http://www.ers.usda.gov/briefing/southkorea)